

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/087,825	WINTHER, KASPAR TOBIAS	
	<b>Examiner</b>	<b>Art Unit</b>	
	Asok K. Sarkar	2829	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/10/2003.
2. ☒ The allowed claim(s) is/are 1,3-6,9,13,14 and 16.
3. ☒ The drawings filed on 31 May 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's explanation of the instant invention in pointing the difference with the cited prior art was found to be convincing to the Examiner. Additionally, Applicant's amendment of claims 1 and 16 corrects the problems noted in Paper No. 0803, mailed August 13, 2003, paragraphs 1 – 7 and accordingly, the rejection to claims 1, 3 – 6, 9, 13, 14 and 16 based on 35 U. S. C. 102 (b) and 103 (a) is withdrawn.

### **EXAMINER'S AMENDMENT**

2. In view of allowable subject matters, the Applicant's representative was contacted in order to amend claims 1, 5 and 16 so that the limitations are clearly defined to overcome prior art and informalities. Permission was needed to cancel withdrawn claims.

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kasper T. Winther on July 7, 2004.

The application has been amended as follows:

✓  
Cancel claims 2, 7, 8, 10 – 12, 15 and 17 – 20.

In claim 1, line 6, following the word "achieved", insert - - predominantly - - .

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In claim 5, line 2, following the word 'said', delete "variations" and insert - - changes - -.

Replace claim 16 with the following:

- - A method to join materials comprising the following steps:

(a) diffusion bonding;

(b) heat treatment at a temperature and duration to induce substantial diffusion beyond what is required for the bonding to take place, whereby said materials can be joined in a manner that withstands changes in temperature despite said materials having different thermal expansion coefficients. - -

***Allowable Subject Matter***

4. Claims 1, 3 – 6, 9, 13, 14 and 16 are now allowed.

5. The following is an examiner's statement of reasons for allowance:

Claims 1, 3 – 6, 9, 13, 14 recite, inter alia, a method to join materials comprising the step of providing an intermediate layer with gradual changes in chemical composition and thermal expansion coefficients across said intermediate layer in a direction perpendicular to the bonding surface, where said changes in composition have been achieved predominantly through diffusion of elements. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Claim 16 recites, inter alia, a method to join materials comprising the steps of

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diffusion bonding and heat treatment at a temperature and duration to induce substantial diffusion beyond what is required for the bonding to take place, whereby said materials can be joined in a manner that withstands changes in temperature despite said materials having different thermal expansion coefficients. The art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

### ***Conclusion***

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asok K. Sarkar whose telephone number is 571 272 1970. The examiner can normally be reached on Monday - Friday (8 AM- 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571 272 1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Asok Kumar Sarkar*  
Asok K. Sarkar  
July 8, 2004

Patent Examiner